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Steentjes, L., Siesling, S., Drummond, F. J., van Manen, J. G., Sharp, L., & Gavin, A. (2015). Factors associated with current and severe physical side-effects after prostate cancer treatment: what men report. Poster session presented at The 37th Annual IACR Conference, Mumbai, India.

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Factors associated with current and severe physical side-effects after prostate cancer treatment: what men report

L Steentjes, S Slesling, F.J Drummond, J.G van Manen, L Sharp, A Gavin

Background:

Prostate cancer (PCa), the second most common male cancer in the developed world is increasing. Ongoing side-effects post-treatment were reported by 75% of PCa survivors in population-based research (Ref below).

Aim:

To identify patient-related and disease-related characteristics that are associated with a range of current and ever experienced severe physical side-effects among prostate cancer survivors.

Methods:

Questionnaire survey to 6,937 PCa Survivors identified from 2 population based Cancer Registries on the Island of Ireland (National Cancer Registry of Ireland (RoI) and N. Ireland Cancer Registry (NI)) diagnosed 2-18 years previously. Survey included symptoms at diagnosis, primary treatments and physical side-effects - ever and current at time of questionnaire completion. Clinical staff checked eligibility of survivors for (I) aware of their PCa diagnosis, (II) well enough to complete a survey, (III) usually a resident of RoI/NI and (IV) able to understand English.

METHODS continued

Outcome variables post treatment were:, incontinence, loss of libido, impotence, bowel problems, breast changes, hot flushes and fatigue.

Men were grouped according to 'early' stage I/II and Gleason Grade (GG) 2-7 at diagnosis (localised) and 'late' stage III/IV and any GG at diagnosis (n=689) (locally advanced/advanced) disease at diagnosis. Univariate and multivariate logistic regression analysis were performed to identify patient and disease-related factors associated with current side-effects of any severity and (ii) severe side-effects ever experienced.

Survivors with other combinations of stage and Gleason Grade (GG), or unknown stage or GG, were excluded from analysis (n=959) leaving 2,389 PCa survivors for analysis.

Potential explanatory variables: age and comorbidities at diagnosis, highest level of education completed, jurisdiction (RoI, NI), pre-treatment symptoms, biopsy complications, TURPs and treatment ever had. Univariate and multivariate logistic regression analysis were performed to identify patient and disease-related factors associated with side-effects.

Results:

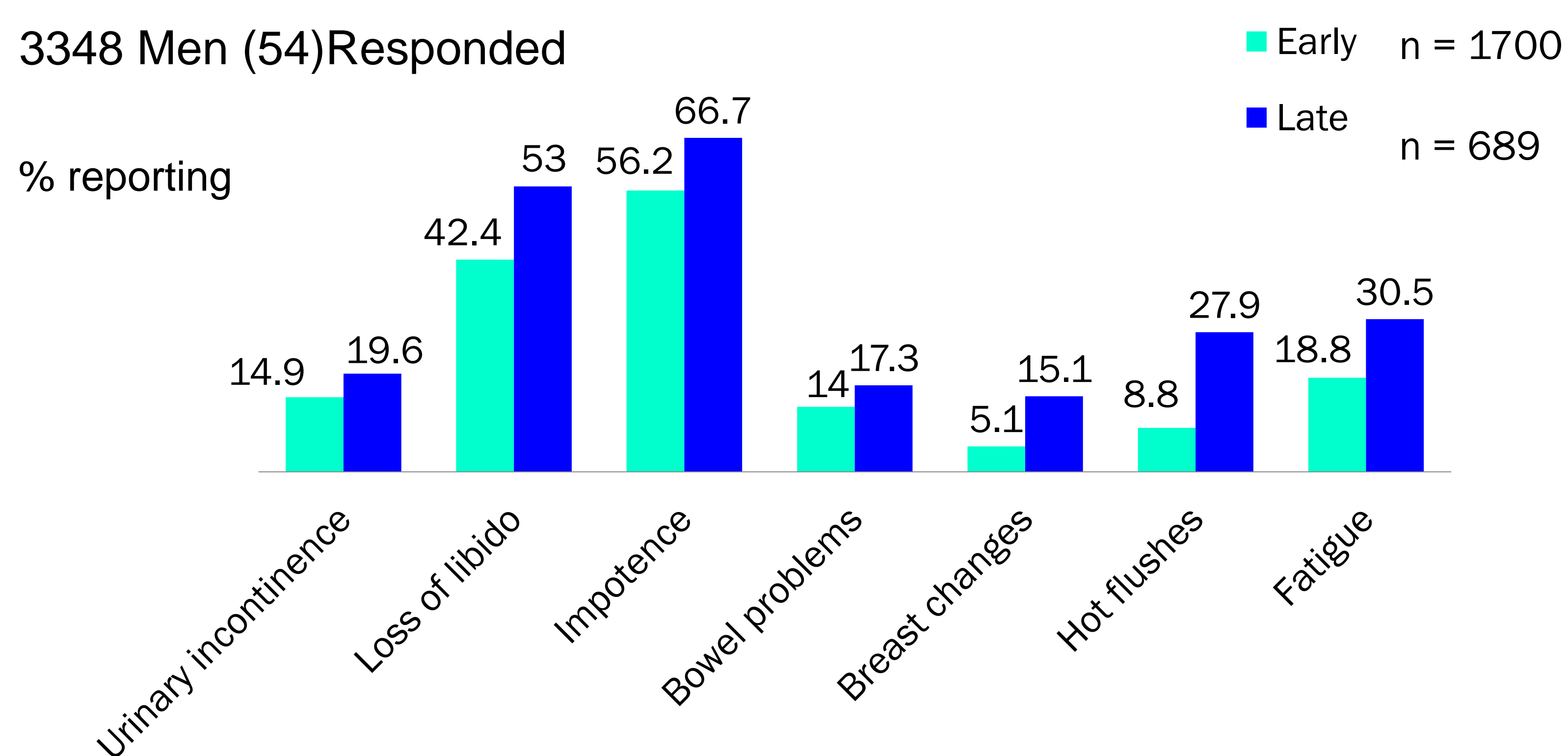


Figure 1a: 'Current' side-effects in early and late disease (%)

- 'Current' and 'Ever Had' side effects were more common in late than early disease (Fig 1a).
- Severe side effects were common with impotence highest at 40% in early patients and 53% in late PCa survivors (Fig 1b).

Factors associated with 'current' side-effects in early disease

- Radical Prostatectomy (RP) was associated with a higher risk of incontinence and Erectile dysfunction. Brachy therapy (BT) was associated with a lower risk of fatigue while Active Surveillance / Watchful waiting was associated with a lower risk of incontinence, sexual dysfunction, and fatigue (p<0.05).
- Multiple comorbidities at diagnosis and complications post-biopsy were associated with a higher risk of bowel problems (p<0.05).

Conclusions:

Treatment is the most important factor associated with post-treatment side-effects with radical prostatectomy associated with most side effects and most severe side effects of all treatments. After treatment, various other factors such as pre-treatment function, comorbidities and a history of biopsy complications were strongly associated with a higher risk of side-effects. These findings may be used to better inform PCa patients and physicians about the potential side-effects associated with specific treatments and which patients may be at risk of these as well as informing strategies for post-treatment follow-up and monitoring. This could ultimately lead to better informed treatment decision-making and better support after treatment.

Ref. Gavin AT, Drummond FJ, Donnelly C, O'Leary E, Sharp L, Kinnear HR. [Patient reported "ever had" and "current" long term physical symptoms following prostate cancer treatments](#). BJU International 2015, Jan. <http://onlinelibrary.wiley.com/doi/10.1111>.

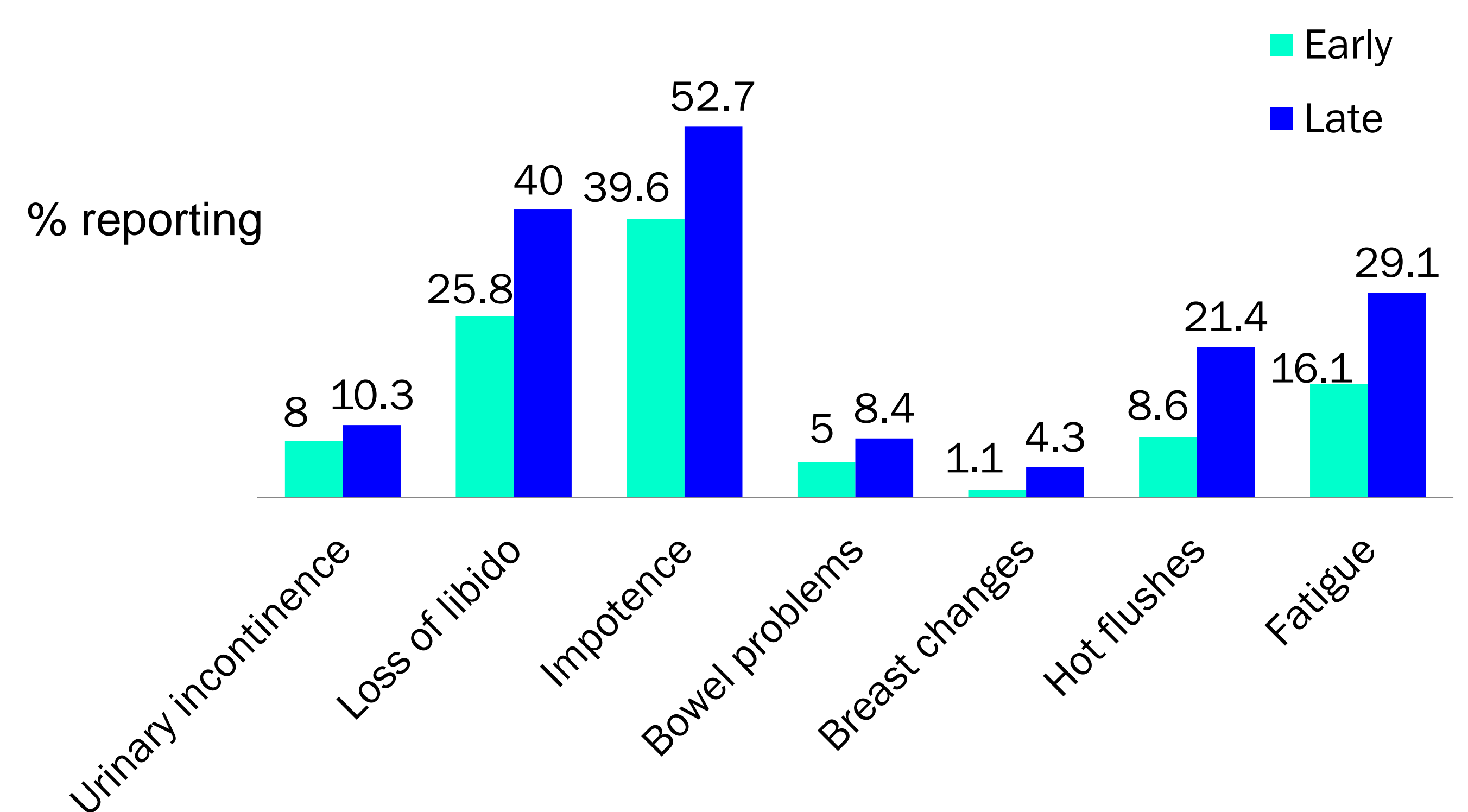


Figure 1b: 'Severe side-effects ever experienced' in early and late disease (%)

Factors associated with 'severe' side-effects ever experienced in early disease

- RP was associated with a higher risk of hot flushes and fatigue and the side-effects mentioned for 'current'. BT was associated with a lower risk of impotence (p<0.05).

Factors associated with 'current' side-effects in late disease

- Complications post-biopsy were associated with a higher risk of sexual dysfunction (p<0.05).
- Comorbidities at diagnosis is associated with a higher risk of incontinence, bowel problems and fatigue (p<0.05).

Factors associated with 'severe' side-effects ever experienced in late disease

- Complications post-biopsy were associated with higher risk of incontinence, hot flushes and fatigue (p<0.05).
- Multiple comorbidities at diagnosis was associated with a higher risk of bowel problems and fatigue (p<0.05).

Acknowledgements:

The N. Ireland Cancer Registry is funded by the Public Health Agency for Northern Ireland. This work was funded by Prostate Cancer UK, R&D of PHA, N. Ireland, Health Research Board, RoI. Thanks to men who completed the survey and Dr Heather Kinnear for her work and management of the N. Ireland part of the project.